of furnishing free care to the indigent sick and charging the full cost to the ordinary salaried man. Depreciation and interest charges upon the buildings and equipment should be met from these voluntary sources or from state aid, and only the cost of current operation charged to the ordinary paying patient. The cost of the care of patients who are unable to pay should be borne entirely by the state or by some form of compulsory health insurance.

One of the most important needs of the present day is a complete reorganization of the nursing service in general hospitals. The primary duty of a hospital is to give an adequate nursing service. In most hospitals this is not being done. Businesses train junior employees in order that they may be more efficient later on. Nurses are being trained mostly to go out of their hospital and do private duty nursing. The private duty nurse is not receiving too much for her services, for the simple reason that she is constantly faced with the hazard of waiting for another case, and the sum total of her earning over the year is very meagre. Every patient in hospital should be receiving a complete nursing service by employees of the hospital. If a patient desires and can pay for a special nurse for twenty-four hours of the day, he should be supplied one, not privately, but by the hospital. Upon a basis of averages in the larger hospitals nurses could be kept on the staff, nursing services could be charged patients by the hour, and the cost of a twenty-four hour special nursing service would not be over $8.00, where it is now $14.50. Nurses are being employed by hospitals at a maximum of seventy-five dollars per month, and their board and room costs about $1.00 per day. So that on a basis of twenty-five working days per month, they would cost $4.00 per day, where they now cost the patient $7.25.

SUMMARY

Some of the hospital needs are:—

1. Continued encouragement in building and equipping voluntary hospitals.

2. Payment of the full cost of care of the indigent sick in hospitals, including medical care, by the State or compulsory insurance.

3. Placing of every physician on the staff of some hospital.

4. Charging ordinary paying patients only the current cost of their hospitalization.

5. Providing a means whereby such patients may receive special medical and surgical facilities at much less cost than at present.

6. Provision of a complete nursing service by the hospitals.

THE IDEAL HOSPITAL OF THE FUTURE*

BY J. H. HOLBROOK, M.B.,

Medical Superintendent, Mountain Sanatorium, Hamilton

After a short introductory note of a historical nature, this paper continues. [Ed.]

IN Canada, one hundred years ago, there were only a few hospitals, these being located in the larger cities, but during the last half century the number has seen a very rapid growth, until, in 1929, there was in Canada a total of 886, providing 74,882 beds. As a matter of fact, these totals are increasing month by month. If this rapid growth were the result of a well thought-out plan of organization we might believe that our modern hospital is the last word in the application of medical science, but when we come to look into the matter we find that there is a great lack of uniformity in the service provided, and that only in the larger hospitals, which serve as teaching centres, do we find any well balanced organization, combining with beds for treatment clinics for ambulant cases and facilities for diagnosis, the combination of which could be looked upon as providing a reasonable health program for the community in which the hospital is placed. The smaller the hospital, the more does it confine its activities, as a rule, to treatment of acutely ill patients in its community, and the scientific work of serving to find out what is wrong with people is in great part neglected. This tendency is reflected in the attitude of the public to hospitals as expressed by legislation for their support, for if we are to judge of

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the opinion of legislators, and therefore of the public who elect them, we must conclude that the only service which they appreciate is that rendered to sick people who can be given treatment in hospital beds, the same as was the case in the hospitals of the Middle Ages. Of course it is easier to count the number in a hospital and to determine the financial assistance on that basis than it is to place a value on the scientific investigation that is done in an institution, but if the public is ever to place a true value on the prevention of illness, this present system of financing hospitals by paying grants on the basis of the number of days a patient stays in a hospital bed must be replaced by some other plan that seeks continuously to keep people well.

In trying to solve our social problems, it is well for us to watch the progress of events in England. In that country until recently they had three types of institutions. For the very poor, there were the poor-law institutions; for the middle class, there were the great voluntary hospitals maintained by donations from the people; and the well-to-do were cared for chiefly in private hospitals or nursing homes. In addition to these there were the military institutions for the treatment of soldiers who had served in the Great War. Never before had so great a number of the people of the nation given military service, and never before were there so many people who looked upon their hospital service as a right which they had earned through this service. As a result of so many ex-service men receiving from the state the hospital service which they required, and as they refused to accept this service in poor-law institutions, a feeling gradually grew up throughout England that in the matter of treatment of disease her citizens would no longer abide the taint of poverty, and, as a result of this attitude, the poor-law institutions have had to be nationalized and modernized, not only by being equipped with modern facilities for the treatment of cases requiring admission to hospital beds but also for diagnosis and for treatment of ambulant cases. In a recent report, Sir George Newman has said that the taking over by the Department of Health of the poor-law institutions was not a step desired by them, but that it was forced upon them by the will of the people, and that this was probably the greatest step that has ever been taken in the advance of medical organization in Great Britain.

Another very interesting reaction of the British people to hospitals has come to light as a result of their experience with the Panel System of medical services. In the olden days the great voluntary hospitals of London provided a diagnostic service that has been admired and copied throughout the world. With the coming of the Panel System it at first looked as if these outdoor departments would no longer be able to function, for with the new system a large percentage of the people was provided with what appeared to be a fairly complete medical service, and eventually it was thought that this plan would be extended until it included practically the whole nation. Many factors have operated against the carrying out of this plan in its entirety, the chief of which, of course, was finance. It was believed that with such a complete health service, the amount of illness would gradually decline, and that, from year to year, decreasing costs would make it possible to extend this service to a larger proportion of the people. But, contrary to all expectations, the number of people claiming benefit for sickness has from year to year increased and the costs from year to year have mounted. As a result, the cost of this service to the nation has become so great and the deficit has become such a burden that it has not only been impossible to extend the service, but, in the recent attempts to balance the budget, the amount paid to doctors for their services to the people has been reduced, and it is questionable if the efficiency of the service has not been further decreased.

But a greater cause for inefficiency in the Panel System is due to the fact that it failed to supply the diagnostic service which was the chief feature of the outdoor service. At first these outdoor clinics saw a very considerable reduction in the number of their patients. However, as time went on, the people receiving service from panel doctors found that the more popular the doctor and the greater the number of patients he had on his list, the less time had he to give them an adequate diagnostic service, and, as a result, it was found that the practice of supplying bottles of medicine in lieu of diagnosis gradually reached such proportions as to become a real menace to efficiency. As a result of all this the people of London and the larger cities are drifting back to the outdoor departments where they can receive adequate study of their cases. Undoubtedly this would be a step in the right direction if this diagnostic service of the voluntary hospitals was recognized by the state, but when these hospitals are compelled, as in past

days, to look to the donations of the rich for their financial support, and when the rich are finding it impossible to carry the heavy burden of taxation, to say nothing of continuing charitable donations, the future of the voluntary hospital has become a matter of great concern. As a matter of fact, some, for instance, Brompton, which treats consumptives, have been very glad to receive rates from the public health authorities on the basis of a certain grant per day for maintenance of patients sent them by the public health departments, and probably the future will see a greater drift back to these voluntary hospitals on this same basis.

Thus, I think you will agree, that the people of England are not realizing their expectations through the Panel System, a system in which the medical service is supplied by a single practitioner or by a partnership of two or three men, and that the drift seems to be back to a combination of the general practitioner and an efficient hospital service. It would seem to me, therefore, that in trying to plan an ideal hospital service, the experience of the British people should be taken very seriously to heart, for this drift back to the outdoor clinics of the voluntary hospitals in my opinion is no chance occurrence, but is really a result of the fundamental principle in scientific medicine that treatment must always be based upon a diagnosis of the disability to be treated, and while symptoms must sometimes be immediately alleviated by the administration of drugs, yet at all times the chief business of the doctor should be the thorough investigation of his case so as to arrive at an accurate diagnosis and adequately treat the main cause of the disability. In the light of these experiences can we not improve the organization of our hospitals in some way, so that they will provide a diagnostic service that will be available both for the citizen who is ill and for the doctor who is responsible for his recovery? Such a plan could be worked out in a practical way, at a cost that would not be prohibitive, and with results that would be satisfactory, not only from the reduction of illness but also from the gradual reduction in costs of the service.

In all the discussions that have taken place on state medicine, the one idea that has been most generally accepted is that the family physician must be retained. If this is a necessary principle, then the common sense thing would be to help to establish the family physician as the very corner stone of an efficient medical service. Probably the greatest trouble with our present service is that instead of having changed promptly to meet changing conditions we are still trying to carry on with an out-of-date organization, an organization that was fairly efficient in meeting the needs of a few decades ago but is totally inadequate to-day. Then the family physician did not need to worry his head about an x-ray investigation, for such a thing was unknown. Then, too, the laboratory investigation consisted in little more than very crude methods of examination of urine and simple procedures dependent for the greater part on close powers of observation. Today, in some obscure cases, we require a whole series of extensive procedures, such as, investigation by the electro-cardiograph, by the metabolimeter, intricate blood tests, spinal punctures, and examination of spinal fluid, in fact, so many intricate procedures that it is needless to attempt to enumerate them.

If the Panel System falls short, both through excessive cost and through not providing a scientific diagnostic service, why cannot we try the plan of reorganizing our hospitals, making them a part of a nationalized health service, and using them to provide diagnostic facilities for the general practitioner, in an earnest effort to prevent or postpone the development of incurable conditions by recognition of these conditions in their incipient stages? In order to try to prove that such a plan is not altogether impractical and not altogether contrary to the genius of medical organization in this country, I would like to point out, briefly, some of the changes that have been recently introduced in this Province, and in this Dominion, along the line of assistance in diagnosis, or in prevention of disease, so as to demonstrate the principle, now generally accepted, that curative and preventive medicine cannot be separated. In fact, this development has already gone so far that we might very well call it the Ontario plan, or the Canadian plan, for an improved medical service. Then, if we are willing to go this far, there should not be much objection to reorganizing our hospitals so as to bring them in line with this definite trend of development.

Let us first note the diagnostic procedures that have been introduced in recent years through the assistance of aid from the province, or from other funds obtained from public or private sources. First, then, in the field of tuberculosis, I would mention the assistance offered through travelling diagnostic clinics under the Provincial

Department of Health. These travelling diagnostic clinics are now available to a limited degree for every section of the province, at the request of the medical association of that district. Patients are examined only at the request of the medical practitioner and the report of the investigation is sent not to the patient but to the general practitioner, the responsibility for the case throughout being left with the recognized family physician. This provincial diagnostic service is working hand in hand with what might be called an extension diagnostic clinic service operated by the sanatoria in the districts surrounding their institutions, and wherever this plan is operated a decided improvement in the tuberculosis situation gradually manifests itself. The trouble with the plan is that there has been no definite fund for its financing, but recently the sale of Christmas seals has frequently been used for this purpose, and in some cases the clinics are financed by the local boards of health.

Another illustration of organization for diagnosis is the extension clinics in connection with the mental hospitals of the province. This is a more recent step, but one which was considered necessary to try to overcome the shortage of beds for mental cases. Already clinics have been organized in several centres with very satisfactory results. If the actual onset of insanity can be prevented by the discovery of mental abnormalities in their incipiency, who can foretell the benefit of this step to the province, both from the economic and health standpoints? We can be very sure that the plan will be watched with great interest, and it is hoped that much good will result, both from decrease in the number of mental cases and from a decreased demand for hospital beds for such cases.

Another very perceptible growth in the use of diagnostic agencies, which is very evident at the present time, is the increase in the use of the outdoor departments of hospitals where these are already organized. This change has come about to a great extent as a result of the unfortunate situation resulting from unemployment and in the inability of families to pay for the services of their family physician. Whatever the final result, it certainly shows that the outdoor service of hospitals is necessary as a relief measure to meet the needs of the present situation, and it would seem that the next step would have to be to make this a well organized department with an administrative official of the hospital in immediate charge. There is little doubt, too, that if the information obtained by investigation in these outdoor departments were made available for the family physicians of these patients who are temporarily unable to pay for medical services the treatment of the conditions found would in many instances be far more efficiently carried out by these same family physicians than under present conditions.

As a fifth development, which has to do with the improvement of the diagnostic service of practitioners, I would like to mention the post-graduate service sponsored by the Ontario Medical Association through funds derived from a special donation. With medicine a progressive science, it has been found absolutely necessary to take the newer knowledge to the men in general practice in the distant parts of the province, and in this plan, in which Canada is leading the world, we have in practical form a demonstration of the principle that a graduate in medicine has entered a profession in which he must always be a student, and undoubtedly the people of the province have already benefited by this plan out of all proportion to its cost.

The above measures, because of their aid to diagnosis, are indirectly preventive. In addition there are certain directly preventive measures that have been established by the Provincial Department of Health. These need merely to be enumerated, as they are so well known and so widely used. The list includes the free supply of small-pox vaccine, diphtheria antitoxin and various other antitoxins that have been found efficacious, and, in later years, toxoid for immunization against diphtheria and a vaccine for immunization against scarlet fever. Various other preparations are also supplied free of cost by the Provincial Department of Health, a recent production being blood from patients who have had infantile paralysis. This will be added to, there is no doubt, from time to time, but the principal feature of the service is that prevention of disease is recognized as a great national asset. If to these measures of the Provincial Department of Health could be added a full time public health service such as is in operation in Great Britain we would have a public health service excelled by no other country in the world

Now for one moment let us discuss the organization of the outdoor departments of our hospitals. In a few hospitals, the outdoor department is used as a means for the education of medical students, and here the diagnostic service is most efficient. About these hospitals

I have nothing to say, except to hold them up as an example for other hospitals that do not serve as teaching centres. Outside of these institutions, the outdoor departments of hospitals are still in most cases very unsatisfactory. In most cases the histories taken are very sketchy, and, in fact, in many cases no history that really deserves the name is recorded. Rarely do we hear of a definite weekly program for a patient, commencing with a complete history, followed by a preliminary investigation, this to be followed during the next few days by various clinical investigations which are suggested by this preliminary investigation, and the whole to be finally correlated by a study of the complete records and by a final diagnosis. All too frequently the out-worn idea is re-established that to obtain a bottle of medicine is the sole purpose of coming to the outdoor clinic.

Personally, I would like to see this diagnostic work organized as the first unit of the hospital service and would like to see it made compulsory in every hospital. Then, with the history and investigations completed, and the diagnosis established, and after a social service investigation to determine what share of the cost of the work the patients can pay, the complete reports could be typed and forwarded to the family physician who has requested the investigation. In most cases, when relieved of the excessive cost of clinical investigation, the patient would probably be able to pay his own physician, and even when he is unable to do so it might be considered more economical for the municipality to pay the family physician a fixed rate for service to indigents, instead of having treatment invariably carried out at the hospital as at present. In any case the principle should be recognized that in ordinary cases the investigation made by the outdoor department is available for the family physician, thus divorcing the stigma of indigency from the outdoor service, and making that service available not only for indigents but also for any tax-payer of moderate means at the request of his physician.

Thus we would be able to establish accurate diagnosis as the foundation of our medical service, and our hospital service, instead of being planned chiefly for the treatment of indoor patients, would be subject to the following classification:—1. Diagnostic service; 2. Social service department; 3. Department of outdoor treatment; 4. Department of indoor treatment. Thus every family physician would be in intimate contact with his nearest hospital, receiving the help in the service of his patients which he alone cannot give them, and which today the patient too frequently fails to receive at the proper time. The criticism may be raised that this plan will drive consultants out of practice or reduce them to the rôle of family physicians, if that be considered a lesser rôle. This I do not believe will be the case, for so soon as we educate the public to thoroughly understand that diagnosis is the first essential of adequate treatment, we shall have an ever increasing demand for the diagnosis of disease in its early stage, and, as is well known, the more incipient the lesion the more difficult is the problem and the greater will be the requirement for training and experience on the part of the consultant. It seems to me that by such a plan the consultants, who will be the leaders and teachers in medicine, will have their work increased rather than decreased, and that, conversely, the field for the inefficient physician and for the quack and cultist will gradually decrease because of a more enlightened public.

But what is to be done with the small hospitals that do not even attempt to carry on an outdoor department? These institutions, because of their difficulty in financing their indoor and operative departments, cannot even attempt to give an outdoor department for which no funds are procurable, and so they are for the most part merely treatment institutions for patients who need to be hospitalized, in order to secure service for acute conditions, or in order to secure surgical care and convalescent after-care. These institutions are located in our larger towns, sometimes serving the town alone and sometimes also the surrounding district. Undoubtedly they provide a very convenient service for the people of that community, but as for meeting the health needs they do far less than they would be able to do if our hospitals, large and small, were financed in a scientific manner based on service rendered, instead of on the municipal rate of so much per day per hospital bed.

How then shall we provide an ideal hospital service? In suggesting changes at the present time, I am only interested in the hospital service from the community standpoint, and, first of all, I would advance the claim that every part of the province should be hospitalized, either in relation to our present hospitals, or, if these are insufficient, others should be added so that the hospital would be within reach of every citizen of the community on some reasonable basis as

regards distance, and facilities for service. Possibly several of the smaller hospitals would have to be correlated with one larger central hospital, the latter to have all the modern equipment that would be necessary in our very best institutions, while the smaller would be required only to provide certain absolutely necessary essentials of equipment. As a corollary to this would be the principle that every citizen would have a right to look to the hospital for assistance, and, conversely, he would be compelled to support that hospital. In other words, I can see no reason why both the capital cost and the diagnostic service of our hospitals should not be financed on a community basis, somewhat the same as is done in the case of our school service.

Apart from universal contribution towards the capital account and the diagnostic service of the hospitals, I do not think any very radical changes are necessary and in so far as maintenance of patients in hospitals is concerned, I see no need to change our present system, except to equalize the rates to supporters of nationalized hospitals, and to reduce the cost gradually wherever this is possible. Possibly a solution in the matter of both hospital maintenance costs and medical fees to physicians could be found by the establishment through independent sickness insurance companies of individual and family sickness insurance. With this diagnostic service provided for on a nationalized basis I do not think it would ever be necessary to nationalize treatment as has been done by the Panel System, for our present system of caring for the treatment of indigent patients could very well be continued for what would probably prove to be a gradually decreasing percentage of the population. With regard to details of organization of a diagnostic outdoor service as the chief feature of the changes suggested, there would, of course, be need for a very considerable increase of clinical and laboratory staff; such would need to be full-time men, most of whom could be recent graduates who in addition had completed internship in some well recognized hospital, and who for the experience to be gained would take a small salary for two or three years, as a step towards the vocation of the family physician, a goal that would thus be greatly enhanced both because of their greater experience and because of their greater opportunity for practising scientific medicine. These are matters, however, which need no discussion here, for they have been discussed in detail in the report of last year's Inter-Relations Committee. In this way it seems to me therefore, that by making hospitals universally available and universally supported we would do away with the need for any nationalized medical service as it is understood in England today, but, with our hospitals organized on the basis of a diagnostic service available to citizens of limited means as an aid to their family physicians Canada could point the way to a new medical era through the development of a scientific service that would be both practical and efficient, and in harmony with the sociological standards of our day

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XANTHOMATOSIS: (SCHÜLLER-CHRISTIAN'S DISEASE; LIPOID HISTIOCYTOSIS).—Merrill C. Sosman discusses the cholesterol disease of Schüller-Christian, its manifestations, its natural course, and in particular the effect of roentgen treatment on the local deposits and on the signs and symptoms of systemic disturbance. To that end he reviews three cases that he has reported previously and brings them down to date, reviews and brings down to date one case reported by Christian in 1919, and reports two new cases. He summarizes his study by stating that xanthomatosis (lipoidosis, Schüller-Christian type) is due to a disturbance of lipoid metabolism and is characterized by deposits of lipoids, chiefly cholesterol and its esters, in various organs and tissues in the body. The signs and symptoms depend on the location and extent of these deposits. Chief among them are defects in the bones, exophthalmos, diabetes insipidus, gingivitis, cessation of growth, and occasionally adiposogenital dystrophy. Treatment has been ineffectual with the exception of roentgen therapy to the areas of lipoid deposit, which has uniformly resulted in prompt healing changes. The improvement has been most marked as regards the disappearance of the defects in the bones, least marked as regards the exophthalmos. The change in general or systemic signs and symptoms depends on the areas treated and not on the quantity or quality of the therapy given.—*J. Am. M. Ass.*, 1931, **98**.

THE NINE PROPERTIES OF WYNE

Wyne of nature hathe properties nyne;
Comfortythe coragis; clarifiethe the syght;
Gladdeth the herte, this lycor most devyne;
Hetythe the stomake, of his natural myght;
Sharpithe wittis; gevith hardines in fight;
Clensyth wounds; engendrithe gentyl blode.
Licor of licor, at pestis makyth men lyght,
Scoureth ye palat, through fyne ye color good.
—John Lydgate.

Yif thou wilt been hool and kepe the fro sykness,
And Resiste the strook of pestilence,
look thou be glad and voyde al hevyness;
ffleen wykked Eyerys eschewe the presence
of enfect placys Causing the violence;
drynk good wyn and holsom metys take,
Walk in Clene Eyr eschewe mystes blake.
—John Lydgate in *Secrees of Old Philisiffees.*